

What is claimed is:

1. An apparatus for stacking a predetermined number of sheet members successively charged by a feed system in a stacking position, comprising:

sheet member holding means disposed above said stacking position for temporarily holding at least a first sheet member that is charged; and

actuating means for displacing said sheet member holding means from above said stacking position to drop said sheet member held by said sheet member holding means into said stacking position.

2. An apparatus according to claim 1, wherein said sheet member holding means comprises:

a plurality of temporary receiver rods extending in the direction in which said sheet member is charged;

each of said temporary receiver rods having a plurality of air ejection holes which are open toward said sheet member.

3. An apparatus according to claim 2, wherein said temporary receiver rods have respective plates with said air ejection holes defined therein, said plates having respective surfaces treated with a reduced coefficient of friction.

4. An apparatus according to claim 3, wherein each of said plates has round edges on opposite sides and distal ends thereof.

5 5. An apparatus according to claim 1, further comprising:

variable stopper means for engaging and releasing the sheet member from said sheet member holding means when said sheet member holding means is moved away from said stacking position.

6. An apparatus according to claim 5, wherein said variable stopper means comprises:

a pulling guide angularly movable by an actuator;
15 said pulling guide having a guide bent toward said sheet member held by said sheet member holding means for engagement with said sheet member.

7. An apparatus according to claim 1, further comprising:

20 a sheet member sensor for detecting when said first sheet member is held by said sheet member holding means.

8. An apparatus for measuring a dimension of a sheet member, comprising:

25 a light source for applying light in a wavelength range which prevents the sheet member from being fogged;

a plurality of photodetectors, having respective optical axes directed toward a feed path of the sheet member, for directly or indirectly detecting said light from said light source; and

5 a data processor for detecting the position of an end of said sheet member based on the luminance of said light detected by said photodetectors, and measuring a dimension of said sheet member from the detected position of the end of said sheet member.

10 9. An apparatus according to claim 8, wherein said light applied by said light source is infrared light.

15 10. An apparatus according to claim 8, wherein said data processor comprises:

threshold setting means for setting a threshold depending on an optical property of said sheet member; and

20 end detecting means for detecting the position of the end of said sheet member based on said threshold and the luminance of said light.

25 11. An apparatus according to claim 10, wherein said photodetectors are disposed in a position to detect said light that has passed through the feed path of said sheet member, said threshold setting means comprising means for setting said threshold depending on the transmittance of said light as said optical property of said sheet member.

12. An apparatus according to claim 10, wherein said data processor comprises:

5 dimension acquiring means for determining the dimension of said sheet member based on the position of said end detected by said end detecting means;

skew detecting means for detecting a skew of said sheet member based on the position of said end detected by said end detecting means; and

10 skew correcting means for correcting the dimension of said sheet member determined by said dimension acquiring means based on the skew detected by said skew detecting means.

15 13. An apparatus according to claim 8, wherein said light source comprises an electronic flash lamp for applying said light to said sheet member as it is fed along said feed path, for a predetermined period of time.

20 14. An apparatus according to claim 13, wherein said light source comprises infrared LEDs.

25 15. An apparatus according to claim 9, wherein said sheet member comprises a photographic film, said infrared light having a wavelength of at least 900 nm.

16. An apparatus according to claim 10, wherein said photodetectors comprise CCD cameras for two-dimensionally detecting said light, said end detecting means comprising means for determining a rate of change of luminance along a predetermined direction from a distribution of luminance levels detected by said CCD cameras, and comparing the rate of change with said threshold thereby to detect the position of the end of said sheet member.

17. An apparatus according to claim 8, further comprising:

at least a pair of belt conveyors for feeding said sheet member while gripping the sheet member therebetween.

18. An apparatus for marking a sheet member, comprising:

an exposure head; and

a control system connected to said exposure head for controlling said exposure head to mark a sheet member;

said exposure head having a light source comprising a plurality of white LEDs;

said control system comprising a controller and a driver;

said controller having a data storage unit for storing exposure time data, marking data, and current data for the sheet member;

said driver having an exposure time data controller, a marking data controller, and an LED driver for storing said exposure time data, said marking data, and said current data, respectively, supplied from said controller;

5 the arrangement being such that when said sheet member has reached a predetermined position, the exposure time data and the marking data are read from said exposure time data controller and said marking data controller, and said LED driver is energized to mark said sheet member.

10 19. An apparatus according to claim 18, wherein said light source comprises a plurality of segments made up of linear arrays of said white LEDs, said segments being combined to substantially represent a shape of numeral "8".

15 20. A method of marking a sheet member, comprising the steps of:

 determining and storing exposure time data, marking data, and current data for the sheet member;

20 determining a position to start marking the sheet member based on a detected signal which is generated when said sheet member has reached a predetermined position; and

 energizing white LEDs to mark said sheet member based on said exposure time data, said marking data, and said
25 current data from the determined position.